Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
LightSquared Technical Working Group Report	)	IB Docket No. 11-109
	)	
and	)	
	)	
LightSquared Subsidiary, LLC	)	File No. SAT-MOD-20101118-00239
	)	
Application for Modification of its Authority for an Ancillary Terrestrial Component	)	

REPLY COMMENTS OF RURAL CELLULAR ASSOCIATION

Rebecca Murphy Thompson
General Counsel
RURAL CELLULAR ASSOCIATION
805 15th Street, N.W., Suite 401
Washington, DC 20005

August 15, 2011

Summary

RCA fully supports LightSquared's efforts to provide RCA's members an alternative path to 4G, including access to a nationwide, robust, 4G LTE network. In response to questions raised by the GPS community, LightSquared's recommendations regarding unlikely interference concerns propose a practical path forward. According to the record in this proceeding, LightSquared's recommendations will protect GPS service while permitting LightSquared to promptly begin deployment of its unique wholesale, nationwide 4G mobile network.

LightSquared's proposed "middle ground" approach strikes the right balance. The GPS community asks the FCC to take the entire MSS L-band offline for mobile broadband. Interestingly, AT&T and Verizon Wireless, with extremely strong 4G spectrum positions, also support overbearing restrictions and substantial delay that would likely have the same effect. These approaches are far too severe. LightSquared's approach would permit rapid deployment of a network that will host innovative new services for all Americans, help address some of the most vexing problems facing competitive mobile carriers and their customers, and significantly advance the Commission's goal of promoting much-needed competition in the wireless market.

In an industry that has been deemed "highly concentrated" under DOJ guidelines and is marching towards a duopoly, AT&T and Verizon Wireless have taken control of the wireless handset market and are frustrating the FCC's roaming policy by imposing unwarranted technical and economic barriers to interoperability in the 700 MHz band. While AT&T and Verizon Wireless pursue plans that will preclude nationwide 4G data roaming for customers of competitive carriers (and even frustrate RCA members' efforts to build out their own 4G

networks and spectrum), LightSquared's wholesale approach provides a necessary alternative path for rural and regional wireless operators to provide competitive, nationwide 4G services.

RCA supports and urges the FCC to adopt LightSquared's recommendations as a reasonable compromise. LightSquared has committed to make substantial investments and materially curtail its deployment plan and timetable to mitigate interference while cooperating with the GPS interests to find mutually workable solutions. Cooperation will benefit GPS interests, LightSquared, and consumers and will help facilitate the deployment of broadband service in rural America.

Table of Contents

.

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
LightSquared Technical Working Group Report	)	IB Docket No. 11-109
	)	
and	)	
	)	
LightSquared Subsidiary, LLC	)	File No. SAT-MOD-20101118-00239
	)	
Application for Modification of its Authority for an Ancillary Terrestrial Component	)	

REPLY COMMENTS OF RURAL CELLULAR ASSOCIATION

Rural Cellular Association ("RCA")[1] hereby files these reply comments in above captioned proceeding.[2]

I. Background

On June 30, 2011, LightSquared Subsidiary LLC ("LightSquared") submitted a final report of the technical working group co-chaired by LightSquared and the United States Global Positioning System Industry Council ("USGIC").[3] The technical working group was formed to address potential interference issues arising from the deployment of LightSquared's network that were raised by members of the Global Positioning System ("GPS") community just as LightSquared was preparing to deploy the L-band terrestrial network that the FCC first

---

[1] RCA is an association representing the interests of nearly 100 competitive wireless carriers, including many rural and regional carriers providing commercial services to subscribers throughout the nation. Most of RCA's members serve fewer than 500,000 customers.

[2] *See* Public Notice, *Comment Deadlines Established Regarding the LightSquared Technical Working Group Report***,** DA 11-1133, IB Docket No. 11-109 (released June 30, 2011) ("Public Notice").

[3] *See Final Report*, IB Docket No. 11-109 (filed June 30, 2011). The report was filed in response to a condition in *FCC Order and Authorization*, DA 11-133, 26 FCC Rcd 566, 588, ¶ 48 (Int'l Bur. 2011).

authorized in 2003. The working group report identified technical issues with potential LightSquared operations in the upper portion of the L-Band, which is most proximate to the band used by GPS. It also identified much more limited interference issues associated with operations in the lower 10 MHz portion of the L-band affecting precision GPS instruments.

Along with the technical working group report, LightSquared submitted its recommendations to address interference issues identified by the working group.[4] LightSquared's recommendations indicate its willingness to: (1) operate initially at lower power than permitted by its FCC authorization; (2) agree to a "standstill" in the terrestrial use of its upper 10 MHz frequencies closest to the GPS band while working with the FCC and NTIA to find solutions while the GPS device manufacturers improve the ability of their products to reject signals that operate outside the GPS frequencies; and (3) commence terrestrial commercial operations on only the lower 10 MHz portion of its spectrum and to coordinate and share the cost of underwriting a workable solution for the small number of legacy precision devices that may be at risk.[5]

RCA supports efforts to deploy terrestrial mobile broadband networks in the MSS bands and has previously urged the Commission to facilitate rapid deployment of LightSquared's innovative and unique network.[6] RCA is also sensitive to the importance of maintaining the integrity of GPS services. Based on the developed record, the technical working group's report, and LightSquared's recommendations, RCA believes LightSquared's proposed "middle ground" approach strikes the right balance. LightSquared's approach would permit rapid deployment of a

---

[4] *See* Recommendation of LightSquared Subsidiary LLC, IB Docket No. 11-109 (filed June 30, 2011).

[5] *See* Public Notice at 2.

[6] *See, e.g.,* SAT-MOD-20101118-00239, Reply Comments of Rural Cellular Association (filed December 9, 2010).

network that will host innovative new services for all Americans and help address some of the most vexing problems facing competitive mobile carriers and their customers.

LightSquared's proposed wholesale service promises to provide an alternative path to 4G, including access to a nationwide, robust, 4G LTE network. Considering the many well-documented and substantial obstacles rural and regional carriers face in the mobile broadband market, the FCC should not delay implementation of LightSquared's competitive path to 4G service. The Commission should continue to encourage the rapid deployment of LightSquared's network, which holds great promise for the competitive wireless carriers.

II. Discussion

A. The FCC Should Adopt Policies and Rules that Encourage Competition in a 4G World

1. The mobile broadband industry is too consolidated

LightSquared is attempting to deploy its 4G LTE network at a time when the level of concentration in the mobile wireless industry has never been higher. In the past two years, the Commission acknowledged the precarious state of competition, and in its annual reports on the status of competition in the mobile wireless market has declined to find that the market is competitive.[7] Most recently, in its *Fifteenth Report* on mobile competition, the FCC found that the weighted average HHI for the wireless market as of mid-2010 was 2848 and that the average HHI increased 660 points from 2003 to 2009.[8] Under its horizontal merger guidelines the Department of Justice considers a market with an HHI above 2500 to be "highly concentrated."[9]

---

[7] *See* Implementation of Section 6002(b) of the Omnibus Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 09-66, Fourteenth Report, FCC 10-81, 25 FCC Rcd. 11407 ¶ 1 (2010) ("*Fourteenth Report*"); *see also* Implementation of Section 6002(b) of the Omnibus Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 10-133, Fifteenth Report, FCC 11-103 ¶ 2, ¶ 15 (June 27, 2011) ("*Fifteenth Report*").

[8] *Fifteenth Report* at 46 ¶¶ 51-52.

[9] U.S. Department of Justice, Horizontal Merger Guidelines § 5.3 (Aug. 19, 2010).

The problem of consolidation is even more pronounced in the rural areas that many of RCA's members serve, with only 30 percent of the rural population served by at least three providers capable of offering mobile broadband services.[10] Just two carriers -- AT&T and Verizon Wireless -- hold most of the spectrum below 1 GHz ideal for the provision of mobile broadband, including about 78 percent of the cellular and 700 MHz spectrum combined, and about 90 percent of the cellular licenses.[11] These figures paint a gloomy portrait of an industry marching steadily towards a true duopoly and these figures do not even contemplate the total spectrum holdings by the two largest carriers in light of AT&T's proposed acquisition of T-Mobile.

LightSquared's wholesale broadband network would significantly advance the Commission's goal of promoting much-needed competition in the wireless market. Permitting LightSquared to move forward expeditiously would not only introduce new competition, it would help ensure that existing smaller, rural and regional wireless carriers remain competitive with the major national carriers.

2. Competitive carriers need another path to 4G

RCA's carrier members have deployed advanced wireless services in rural areas and other specific regions throughout the United States. But in doing so, RCA members face many challenges, including difficulties securing data roaming at reasonable terms and rates[12] and the anti-competitive effects of handset exclusivity.[13] These problems have been significantly

---

[10] *Id.*

[11] *Id.*

[12] *See, e.g.* RCA Comments filed in WT Docket No. 05-265 (June 14, 2010): *see also* RCA Reply Comments filed in WT Docket No. 05-265 (July 12, 2010).

[13] *See* Petition for Rulemaking Regarding Exclusivity Arrangements between Commercial Wireless Carriers and Handset Manufactures, Rural Cellular Association, filed in RM-11497 (May 20, 2008); *see also Ex Parte* Letter from Rebecca Murphy Thompson, General Counsel for Rural Cellular Association, to Marlene H. Dortch, Secretary, FCC, filed in RM-11497 (July 14,2010); *see also Ex Parte* Letter from Rebecca Murphy Thompson, General Counsel for Rural Cellular Association, to Marlene H. Dortch, Secretary, FCC, filed in WC Docket No. 05-337, CC Docket No. 96-45, WT Docket No. 05-265, WT Docket No. 09-66, and RM-11592 (June 17, 2010).

compounded as the two largest national carriers have grown by acquiring regional operators. They are being compounded still more as AT&T and Verizon Wireless, which acquired the majority of the 700 MHz spectrum in Auction No. 73, have imposed unwarranted technical and economic barriers to interoperability in the 700 MHz band. AT&T's and Verizon Wireless' actions have essentially precluded data roaming and have undermined the ability of competitive carriers to extend mobile broadband service to rural and regional areas by developing their own 700 MHz band classes and spectrum.[14]

Despite these challenges, RCA members have long provided and will continue to provide the innovative, quality, cost-efficient services that rural and regional consumers enjoy and deserve. But to compete with the major nationwide carriers, rural and even large regional carriers must partner with other carriers through roaming agreements or wholesale arrangements to provide the nationwide coverage that wireless customers expect and demand.[15] While AT&T and Verizon Wireless pursue plans that will preclude nationwide 4G data roaming for customers of rural and regional carriers (and even frustrate RCA members' efforts to build out their own 4G networks and spectrum), LightSquared's wholesale approach provides another path for rural and regional wireless operators to provide competitive, nationwide 4G services.

The importance of 4G data to wireless competition cannot be overstated. 3G data is already an essential element of a wireless service offering, and the need for a path to a 4G data service grows every day. Lack of 4G service would not simply limit the growth of competitive carriers into a new line of business. Over time, 4G data is likely to become the primary service consumers seek. No matter how good a carrier's voice network is, the inability to provide

---

[14] *See* 700 MHz Block A Good Faith Purchasers Alliance Petition for Rulemaking, filed in RM-11592 (Sept. 29, 2009); *see also* RCA Comments at 19-20, filed in RM-11592 (March 31, 2010).

[15] *See, e.g.,* Comments of Leap Wireless International, Inc. and Cricket Communications, Inc., filed in IB Docket No. 11-109, at p. 3 (July 30, 2011).

nationwide 4G data service will drive rural and regional consumers to choose a national carrier, even if that carrier provides inferior voice service in a rural area. Long term, even a voice call will take place as a 4G data service.

Given the extraordinary importance of nationwide 4G service, the breakneck pace at which consumers are demanding mobile data and better coverage, and the lack of progress to date on regulatory solutions to protect rural and regional consumers, the Commission must take all steps necessary to facilitate other 4G options for competitive carriers. Deployment of LightSquared's network on an aggressive schedule (as LightSquared has proposed and committed to) will provide a timely and critically important alternative 4G option for competitive carriers.

B. The FCC Should Adopt Policies and Rules that Encourage Innovation and Efficient Use of Spectrum and Should Reject Policies that Reward Inefficiency

As demand for mobile broadband and other spectrum-based services continues to grow faster every year, the Commission's rules, policies and licensing decisions must be consistent in rewarding innovation that makes more efficient use of the nation's limited spectrum resources. In recent years, the Commission has progressively moved towards a general policy that spectrum must be used as efficiently and productively as possible.[16] At the same time, the Commission has insisted that inefficient uses of spectrum – including legacy uses – will not be rewarded.[17]

---

[16] *See, e.g.*, Promoting More Efficient Use of Spectrum Through Dynamic Spectrum Use Technologies, *Notice of Inquiry*, ET Docket No. 10-237 (rel. November 30, 2010) at ¶ 1; *see also* Unlicensed Operation in the TV Broadcast Bands, *Second Memorandum Opinion and Order,* 25 FCC Rcd 18661 (2010) ("*Second White Spaces Order*").

[17] For example, in its decision finalizing rules to make the unused spectrum in the TV bands available for unlicensed broadband wireless devices, the Commission refused to reserve more spectrum for wireless microphones. *Second White Spaces Order, supra,* at ¶ 29 ("We observe that wireless microphones generally have operated very inefficiently, perhaps in part due to the luxury of having access to a wealth of spectrum. While there may be users that believe they need access to more spectrum to accommodate more wireless microphones, we find that any such needs must be accommodated through improvements in spectrum efficiency.").

America's competitive wireless carriers and their customers have an urgent need for access to spectrum for 4G services and, in particular, for access to a nationwide 4G platform. As the record indicates, LightSquared has spent years and committed billions of dollars to rationalize the L-band into spectrum blocks that are well suited to providing mobile broadband service in rural areas and nationwide. And while AT&T and Verizon Wireless obstruct competitors from providing nationwide 4G services, LightSquared has taken precisely the opposite approach. LightSquared has adopted a unique service model that permits competitive carriers and their customers to access to a nationwide 4G network on terms that will help level the playing field. By eliminating the two most significant barriers to entry – a nationwide spectrum footprint and the enormous upfront capital costs of building a nationwide network – LightSquared's wholesale approach also lays the foundation for the introduction of new and innovative specialized services that can benefit consumers, businesses, public safety and governments nationwide.

C. Opponents Should Not Be Permitted to Manipulate the FCC's Rules and Procedures to Delay or Prevent Efficient Use of Spectrum or to Block Competitive Connectivity

According to the USGIC, there is simply no path forward that would permit efficient use of the MSS L-band spectrum for terrestrial mobile broadband: "The 1525-1559 MHz and 1626.5-1660.5 MHz bands . . . need to be permanently removed from any consideration for use for by terrestrial mobile broadband services."[18] USGIC and other GPS interests thus ask the FCC to establish guard bands totaling dozens of megahertz in spectrum that has excellent propagation characteristics for mobile broadband communications. They ask the FCC to squander precious spectrum and forego a fundamental innovation in the mobile broadband service market – a nationwide, wholesale 4G network. The GPS manufacturers ask the FCC to

[18] *See* Comments of the U.S. GPS Industry Association at 61.

reward them for past inefficient use of spectrum and to give them a green light to continue that inefficient use. Yet as the FCC itself has acknowledged, the GPS industry has had almost a decade to prepare for launch of terrestrial services in the L-band.[19] Now the USGIC asks the FCC simply to shut down all efforts to make more efficient use of the 1.6 GHz band for mobile broadband service.

In addition to USGIC, both of the dominant wireless carriers support severe limitations and conditions that would have essentially the same effect as the USGIC proposal. AT&T wants the FCC to codify a prohibition on LightSquared deployment in the upper band for "at least ten years" and to impose an unqualified obligation on LightSquared to mitigate all interference received by GPS devices, apparently without any obligation of the GPS industry improve their products on their own.[20] Verizon Wireless also urges the FCC to place the entire obligation to mitigate interference on LightSquared, an obviously unworkable approach that would also prevent deployment of LightSquared's network under any realistic conditions.[21]

AT&T and Verizon Wireless have argued that the FCC must pursue an aggressive policy of opening more spectrum for mobile broadband to meet surging demand. However, AT&T and Verizon Wireless are remarkably quick to support taking the L-band spectrum offline. AT&T and Verizon Wireless must be aware that LightSquared's network promises to help RCA members compete in the near term and will remain competitive in the long term. The FCC should weigh the comments of AT&T and Verizon Wireless accordingly.

Beyond the GPS industry, AT&T and Verizon Wireless would be the *only* beneficiaries of taking the L-band MSS spectrum offline for mobile broadband. Doing so would eliminate a

---

[19] In the Matter of Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz, *Report and Order*, ET Docket No. 10-142, FCC 11-57, 14 ¶ 28 (Apr. 6, 2011).

[20] *See* Comments of AT&T at 9-10.

[21] *See* Comments of Verizon Wireless at 17-19.

facilities-based 4G competitor, further consolidating market power in the hands of the dominant carriers. It also would also permanently eliminate access by their competitors to the large blocks of L-band spectrum – a major windfall for the two carriers that already hold the great majority of the best spectrum for mobile services. And blocking use of the L-band would prevent LightSquared from pursuing its innovative wholesale approach, a business model that threatens to undermine the structural advantages AT&T and Verizon Wireless have sought through consolidation and anticompetitive business practices.

RCA has previously explained how AT&T's and Verizon Wireless' opposition to device interoperability creates de facto device exclusivity to the point of technology denial for many in rural America. RCA has also described how AT&T's and Verizon Wireless' efforts to cordon off certain spectrum bands for preferred device availability exacerbate their increasingly dominant market position, and how the lack of interoperability across the 700 MHz band threatens to neuter the FCC's Data Roaming Order[22] by creating a technological barrier to roaming.[23] AT&T's scheme to eschew the original 700 MHz "Band Class 12", which provided interoperability across the paired Lower A, B and C blocks, and to manipulate the creation of a special 700 MHz "Band Class 17" that operates on the Lower B and C blocks (but not the Lower A Block) is especially troubling. The move simultaneously eliminates the incentive for any manufacturers to design and build devices that will operate on the Lower A block and imposes an unnecessary technical barrier to interoperability between the Lower 700 MHz paired blocks. In the absence of required interoperability across the 700 MHz band, there are few pathways to

---

[22] In re Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services, *Second Report and Order*, WT Docket No. 05-265 (April 7, 2011).

[23] *See* Comments of Rural Cellular Association, Petition for Rulemaking Regarding the Need for 700 MHz Mobile Equipment to be Capable of Operating on All Paired Commercial 700 MHz Frequency Blocks, RM-11592 at pp. 4-5 (filed April 27, 2011).

the development of handsets that will operate in Band Class 12.[24] RCA members have had to seek alternative measures to deploy LTE services and provide rural and regional consumers 4G mobile broadband service.

Wholesale access to LightSquared's 4G network would provide competitive carriers, including carriers whose Lower A block spectrum has been stranded by AT&T's and Verizon Wireless' manipulation of the device market, with a near-term alternative for roaming and access to a more robust device ecosystem by inclusion of Band Class 12 in devices that operate on LightSquared's 4G network. AT&T's and Verizon Wireless' support for blatantly wasteful spectrum policies that would thwart innovation and eliminate a new facilities based platform is consistent with their anticompetitive agenda. The FCC should not permit the incumbent, dominant national carriers to block access to competitive connectivity for rural and regional carriers and their customers, whether through retroactive manipulation of technology standards that could prevent broadband deployments in high-cost, hard to reach areas or through transparent support for blatantly wasteful spectrum policies.

D. The FCC Should Follow LightSquared's Recommendation

RCA supports and urges the FCC to adopt LightSquared's recommendations as a compromise, middle ground approach. LightSquared has committed to: 1) operate at lower power than permitted by its existing FCC authorization; 2) agree to a "standstill" in the terrestrial use of the upper 10 MHz frequencies immediately adjacent to the GPS band; and 3) commence terrestrial commercial operations only on the lower 10 MHz portion of its spectrum while addressing workable solutions for those devices that may be at risk. LightSquared's pragmatic

[24] *See* footnote 16, *supra*.

approach provides a workable path forward.[25] According to the fully developed record in this proceeding, initial deployment in the lower 10 MHz at reduced power would fully protect more than 99% of existing GPS devices. Further, LightSquared has committed to work with the GPS industry constructively to mitigate harmful interference received by legacy precision GPS receivers.

LightSquared has committed to make substantial investments and materially curtail its deployment plan and timetable to mitigate interference while cooperating with the GPS interests to find mutually workable solutions. Cooperation will benefit GPS interests, LightSquared, and consumers and will help facilitate the deployment of broadband service in rural America.

III. Conclusion

For the reasons explained above, RCA supports and urges the FCC to follow LightSquared's recommended solution.

Respectfully submitted,

/s/

Rebecca Murphy Thompson
General Counsel
RURAL CELLULAR ASSOCIATION
805 15th Street, N.W., Suite 401
Washington, DC 20005
(202) 449-9866

August 15, 2011

[25] According to the record in this proceeding, LightSquared's approach is identical to the approach the GPS industry itself proposed earlier this year.